CLAIMS

1. A data input device transmitting an input signal according to the position touched by an operating finger and an operation performed by the finger, comprising:

a finger rest unit on which the finger is placed;

a finger position sensor capable of detecting one of three positions, such as right, left, and middle parts, of the finger rest unit touched by the finger; and

a vertical switch switchable by the vertical movement of the finger rest unit,

wherein the finger rest unit is formed so as to support the finger by two rotary bodies having a rotary axis extending in the longitudinal direction of the operating finger.

2. The data input device according to Claim 1, further comprising:

a rotation detection sensor capable of detecting whether or not the two rotary bodies rotate.

3. The data input device according to Claim 1 or 2,

wherein the finger rest unit includes a relative position tactual member capable of touching the finger located between the two rotary bodies of the finger rest

unit.

4. The data input device according to any one of Claims 1 to 3, further comprising:

a finger rest unit slide mechanism capable of sliding the finger rest unit in the forward or backward direction of the operating finger; and

a slide position detection sensor capable of detecting the slide position of the finger rest unit slide mechanism.

5. The data input device according to any one of Claims 1 to 4, further comprising:

a data conversion unit that converts an output of each sensor and an output of the vertical switch so as to match a protocol recognizable by information equipment; and

an adjustment unit that adjusts the output converted by the data conversion unit to a signal corresponding to a method for transmission to the information equipment.

6. Information equipment comprising:

an output screen which displays information; and

a data input device which moves a cursor or a pointer displayed on the output screen to the predetermined position,

wherein the data input device is capable of transmitting an input signal according to the position

touched by an operating finger or an operation performed by the finger, and includes: a finger rest unit on which the finger is placed, a finger position sensor capable of detecting one of three positions, such as right, left, and middle parts, of the finger rest unit touched by the finger, and a vertical switch switchable by the vertical movement of the finger rest unit, and

wherein the finger rest unit is formed so as to support the finger by two rotary bodies having a rotary axis extending in the longitudinal direction of the operating finger.

7. The information equipment according to Claim 6,

wherein the data input device includes a finger rest unit slide mechanism capable of sliding the finger rest unit in the forward or backward direction of the operating finger; and a slide position detection sensor capable of detecting the slide position of the finger rest unit slide mechanism.

8. Information equipment comprising:

an output screen which displays information on a screen; and

an indication device capable of selecting and designating an option menu displayed on the output screen,

wherein the indication device is capable of transmitting an input signal according to the position touched by an operating finger or an operation performed by the finger, and includes:

a finger rest unit on which the finger is placed,

a finger position sensor capable of detecting one of three positions, such as right, left, and middle parts, of the finger rest unit touched by the finger, and

a vertical switch switchable by the vertical movement of the finger rest unit,

wherein the finger rest unit is formed so as to support the finger by two rotary bodies having a rotary axis extending in the longitudinal direction of the operating finger.

9. The information equipment according to Claim 8,

wherein the indication device includes a finger rest unit slide mechanism capable of sliding the finger rest unit in the forward or backward direction of the operating finger; and a slide position detection sensor capable of detecting the slide position of the finger rest unit slide mechanism.

10. Information equipment comprising:

an output screen which displays information; and

a character input device which displays a predetermined character on the output screen,

wherein the character input device is capable of transmitting an input signal according to the position touched by an operating finger or an operation performed by the finger, and includes:

a finger rest unit on which the finger is placed,

a finger position sensor capable of detecting one of three positions, such as right, left, and middle parts, of the finger rest unit touched by the finger, and

a vertical switch switchable by the vertical movement of the finger rest unit,

wherein the finger rest unit is formed so as to support the finger by two rotary bodies having a rotary axis extending in the longitudinal direction of the operating finger, and

wherein the output screen includes:

a candidate character output unit capable of selecting a desired candidate character inputted based on the signal from the finger position sensor; and

a determined character output unit which displays the selected and determined character on the output screen with respect to the candidate characters displayed by the candidate character output unit on the basis of the signal from the vertical switch.

11. The information equipment according to Claim 10, wherein the character input device includes:

a finger rest unit slide mechanism capable of sliding the finger rest unit in the forward or backward direction of the operating finger; and

a slide position detection sensor capable of detecting the slide position of the finger rest unit slide mechanism.

12. A method of controlling information equipment having an output screen which displays information and a data input device which moves a cursor or a pointer displayed on the output screen to the predetermined position, the method comprising the steps of:

receiving an output signal from a finger position sensor or a vertical switch;

converting the received output signal to a movement command of the cursor or the pointer on the basis of a previously stored signal table; and

outputting a control signal of the cursor or the pointer on the basis of the movement command obtained by converting the received output signal,

wherein the data input device is capable of transmitting an input signal according to the position touched by an operating finger or an operation performed by

the finger, and includes: a finger rest unit on which the finger is placed, the finger position sensor capable of detecting one of three positions, such as right, left, and middle parts, of the finger rest unit touched by the finger, and the vertical switch switchable by the vertical movement of the finger rest unit.

13. The method according to Claim 12,

wherein the finger rest unit is formed so as to support the finger by two rotary bodies having a rotary axis extending in the longitudinal direction of the operating finger,

the data input device includes the rotation detection sensor capable of detecting whether or not the two rotary bodies rotate, and

in the receiving of the output signal, the output signal is received from the rotation detection sensor.

14. A method of controlling information equipment having an output screen which displays information on a screen and an indication device capable of selecting and designating an option menu displayed on the output screen, the method comprising the steps of:

receiving an output signal from a finger position sensor or a vertical switch;

converting the received output signal to a selection-determination command of the option menu displayed on the output screen on the basis of a previously stored signal table; and

controlling and executing the information equipment on the basis of the converted selection-determination command obtained by converting the received output signal,

wherein the indication device is capable of transmitting an input signal according to the position touched by an operating finger or an operation performed by the finger, and includes: a finger rest unit on which the finger is placed, the finger position sensor capable of detecting one of three positions, such as right, left, and middle parts, of the finger rest unit touched by the finger, and the vertical switch switchable by the vertical movement of the finger rest unit.

15. The method according to Claim 14,

wherein the finger rest unit is formed so as to support the finger by two rotary bodies having a rotary axis extending in the longitudinal direction of the operating finger,

the indication device includes a rotation detection sensor capable of detecting whether or not the two rotary bodies rotate, and

in the receiving of the output signal, the output signal is received from the rotation detection sensor.

16. A method of controlling information equipment having an output screen which displays information and a character input device which displays a predetermined character on the output screen, the method comprising the steps of:

receiving a signal from the finger position sensor;

outputting a candidate character by converting the signal received from the finger position sensor on the basis of a previously stored candidate character table and displaying the candidate character to be inputted on the screen such that the candidate character can be selected;

receiving a signal from the vertical switch; and

outputting the determined character by converting the signal received from the vertical switch on the basis of a previously stored determination character table and displaying the selected and determined character on the output screen,

wherein the character input device is capable of transmitting an input signal according to the position touched by an operating finger or an operation performed by the finger, and includes: a finger rest unit on which the finger is placed, the finger position sensor capable of

detecting one of three positions, such as right, left, and middle parts, of the finger rest unit touched by the finger, and the vertical switch switchable by the vertical movement of the finger rest unit,

17. The method according to Claim 16,

wherein the finger rest unit is formed so as to support the finger by two rotary bodies having a rotary axis extending in the longitudinal direction of the operating finger,

the character input device includes a rotation detection sensor capable of detecting whether or not the two rotary bodies rotate, and

in the receiving of the signal, the output signal is received from the rotation detection sensor.

18. A computer program for controlling information equipment having an output screen which displays information and a data input device which moves a cursor or a pointer displayed on the output screen to the predetermined position, the program allowing a computer included in the information equipment to execute the steps of:

receiving an output signal from a finger position sensor or a vertical switch;

converting the received output signal to a movement

command of the cursor or the pointer on the basis of a previously stored signal table; and

outputting a control signal of the cursor or the pointer on the basis of the converted movement command,

wherein the data input device is capable of transmitting an input signal according to the position touched by an operating finger or an operation performed by the finger, and includes: a finger rest unit on which the finger is placed, the finger position sensor capable of detecting one of three positions, such as right, left, and middle parts, of the finger rest unit touched by the finger, and the vertical switch switchable by the vertical movement of the finger rest unit,

19. The computer program according to Claim 18,

wherein the finger rest unit is formed so as to support the finger by two rotary bodies having a rotary axis extending in the longitudinal direction of the operating finger,

the data input device includes the rotation detection sensor capable of detecting whether or not the two rotary bodies rotate, and

in the receiving of the output signal, the output signal is received from the rotation detection sensor.

20. A computer program for controlling information equipment having an output screen which displays information on a screen and an indication device capable of selecting and designating an option menu being displayed on the output screen, the program allowing a computer included in the information equipment to execute the steps of:

receiving an output signal from a finger position sensor or a vertical switch;

converting the received output signal to a selection-determination command of the option menu displayed on the output screen on the basis of a previously stored signal table; and

controlling the information equipment on the basis of the converted selection-determination command,

wherein the indication device is capable of transmitting an input signal according to the position touched by an operating finger or an operation performed by the finger, and includes: a finger rest unit on which the finger is placed, the finger position sensor capable of detecting one of three positions, such as right, left, and middle parts, of the finger rest unit touched by the finger, and the vertical switch switchable by the vertical movement of the finger rest unit.

21. The computer program according to Claim 20,

wherein the finger rest unit is formed so as to support the finger by two rotary bodies having a rotary axis extending in the longitudinal direction of the operating finger,

the indication device is capable of transmitting an input signal according to the position touched by an operating finger or an operation performed by the finger, and

in the receiving of the output signal, the output signal is received from the rotation detection sensor.

22. A computer program for controlling information equipment having an output screen which displays information and a character input device which displays a predetermined character on the output screen, the program allowing a computer included in the information equipment to execute the steps of:

receiving a signal from the finger position sensor;

outputting a candidate character by converting the signal received from the finger position sensor on the basis of a previously stored candidate character table and displaying the candidate character to be inputted on the screen such that the candidate character can be selected;

receiving a signal from a vertical switch; and

outputting the determined character by converting the

signal received from the vertical switch on the basis of a previously stored determination character table and displaying the selected and determined character on the output screen,

wherein the character input device is capable of transmitting an input signal according to the position touched by an operating finger or an operation performed by the finger, and includes: a finger rest unit on which the finger is placed, the finger position sensor capable of detecting one of three positions, such as right, left, and middle parts, of the finger rest unit touched by the finger, and the vertical switch switchable by the vertical movement of the finger rest unit.

23. The computer program according to Claim 22,

wherein the finger rest unit is formed so as to support the finger by two rotary bodies having a rotary axis extending in the longitudinal direction of the operating finger,

the character input device includes a rotation detection sensor capable of detecting whether or not the two rotary bodies rotate, and

in the receiving of the signal, the output signal is received from the rotation detection sensor.